

1-30. (CANCELED)

31. (CURRENTLY AMENDED) An interlacing device (10, 10') for a palletizing machine (1) which palletizes elongated products (2) that are ~~designed~~ to be deposited in superimposed rows on at least one transport pallet (7), the interlacing device (10, 10') comprising:

at least one interlacing gantry (11, 11') ~~extending generally parallel to and along at least a portion of a length of the products (2) comprising~~ [[:]]:

at least two upright posts joined at ~~[[the]]~~ a top by a cross-beam and the at least two upright posts and the cross-beam extending generally parallel to and along at least a portion of a length of the products (2), ~~the interlacing gantry (11, 11') further comprising; and~~

at least one guide (20, 20') carried by the cross-beam, for dispensing an supplied by at least one spool (12) of interlacing material (12') from at least one spool (12); ~~[[and]]~~

wherein the at least two upright posts and the cross-beam extend vertically above and over a gantry base structure (19), and at least a guide section of the gantry base structure (19) extends substantially perpendicular to the cross-beam for facilitating movement of the cross-beam therealong and the interlacing device (10, 10'), the interlacing device (10, 10') also comprises a drive means-mechanism which is operated independently of from the operation of the palletizing machine (1) which palletizes the elongated products (2), the drive means-being mechanism is connected to the interlacing gantry (11, 11') for displacing the interlacing gantry (11, 11'), within the palletizing machine (1) and relative to the base structure, between at least two alternate end positions so as to displace alternately the guide (20, 20') in at least one interlacing plane (P) that is essentially perpendicular to the palletized products (2) alternately from one side to another side of the transport pallet (7).

32. (CURRENTLY AMENDED) The interlacing device according to claim 31, wherein the drive means mechanism causes the interlacing gantry (11, 11') to pivot alternately at least once one-time.

33. (CURRENTLY AMENDED) The interlacing device according to claim 31, wherein the drive means mechanism (14) causes the interlacing gantry (11, 11') to move at least once in alternate translation ~~at least one-time~~.

34. (CURRENTLY AMENDED) The interlacing device according to claim 31, wherein the drive means mechanism (14) ~~[[are]]~~ is selected from the group comprising at least electric motors (15), hydraulic cylinders and pneumatic cylinders.

35. (CURRENTLY AMENDED) The interlacing device according to claim 34, wherein the drive means mechanism (14) comprise at least one transmission system selected from the group comprising at least pinions and a chain (16), and a pulley and a belt.

36. (CURRENTLY AMENDED) The interlacing device according to claim 33 ~~further comprising~~ wherein the gantry base structure (19) comprises at least one chassis (19) equipped with the guide section which comprises guide means for moving the interlacing gantry (11, 11') translationally in a translational direction.

37. (PREVIOUSLY PRESENTED) The interlacing device according to claim 36, wherein the guide means comprises at least one pathway (18) formed in the chassis (19) to receive rollers (17) integral with vertical posts (11a) on the interlacing gantry (11, 11').

38. (PREVIOUSLY PRESENTED) The interlacing device according to claim 31, wherein the interlacing gantry (11, 11') comprises at least two guides (20, 20') located on the interlacing gantry (11, 11') to distribute at least two interlacing ties (12') in at least two essentially parallel interlacing planes (P) distributed along the palletized products (2).

39. (PREVIOUSLY PRESENTED) The interlacing gantry according to claim 38, wherein at least one of the two guides (20') is associated with activating means (21) which displace the at least one of the two guides (20') in alternate translation along the interlacing gantry (11') for a predetermined distance (D) to displace the interlacing plane (P) essentially parallel to itself.

40. (CURRENTLY AMENDED) The interlacing device according to claim 39, wherein the activating means (21) ~~[[are]]~~ is selected from the group comprising at least electric motors, hydraulic cylinders and pneumatic cylinders.

41. (CURRENTLY AMENDED) A palletizing machine (1) for elongated cylindrical products (2), the palletizing machine (1) comprising:

at least one gantry (3), one ~~movable~~ carrier (4) being movable in vertical translation along the gantry (3), at least one ~~movable~~ gripping device (5) being movable in horizontal translation on the carrier (4) and ~~designed~~ to remove the products (2) from a storage ramp (6) and deposit ~~[[them]]~~ the products (2) on a transport pallet (7);

at least one interlacing device (10, 10') being separate from the palletizing machine (1) and comprising at least one interlacing gantry (11, 11') extending generally parallel to and along at least a portion of a length of the products (2), the interlacing gantry (11, 11') comprising at least one guide (20, 20') for supplying an ~~supplied by at least one spool (12) of~~ interlacing material (12') from at least one spool (12); ~~[[and]]~~

wherein the at least one interlacing gantry (11, 11') comprises at least two upright posts interconnected by a cross-beam and the at least two upright posts and the cross-beam extend generally parallel to and along at least a portion of a length of the products (2), at least one guide (20, 20'), carried by the cross-beam, for dispensing an interlacing material (12') from at least one spool (12), the at least two upright posts and the cross-beam extend vertically above and over a gantry base structure (19), and at least a guide section of the gantry base structure (19) extends substantially perpendicular to the cross-beam for facilitating movement of the cross-beam along the interlacing device (10, 10'), the interlacing device (10, 10') also comprises a drive means mechanism which is separate from the operation of the palletizing machine (1) which palletizes the elongated cylindrical products (2), the drive means—being mechanism is connected to the interlacing gantry (11, 11') for displacing the interlacing gantry (11, 11') inside the palletizing machine (1), vertically below the gripping device (5), and relative to the base structure of the interlacing gantry (11, 11'), between at least two alternate end positions so as to displace the guide (20, 20') in at least one interlacing plane (P) that is essentially perpendicular to the palletized products (2) alternately from one side to another side of the transport pallet (7).

42. (CURRENTLY AMENDED) The palletizing machine according to claim 41, wherein the at least one interlacing gantry (11, 11') has dimensions that permit the interlacing device (10, 10') to be ~~integrated~~ located within the gantry (3) of the palletizing machine (1) below the gripping device (5) and outside the transport pallet (7) and the palletized products (2).

43. (CURRENTLY AMENDED) The palletizing machine according to claim 41, wherein the gripping device (5') comprises means for controlling a drive means mechanism associated with the drive ~~means~~ mechanism for the palletizing machine (1) in order to displace the interlacing gantry (11, 11') alternately from one side of the transport pallet (7) to the other essentially parallel to the interlacing planes as the palletizing of the products (2) deposited on the transport pallet (7) progresses and according to a predetermined interlacing pattern.

44. (PREVIOUSLY PRESENTED) The palletizing machine according to claim 41, wherein at least one of the guides (20') on the interlacing device (10') is associated with activating means (21) designed to displace the at least one of the guides (20') in alternate translation along the interlacing gantry (11') for a predetermined distance (D) so as to displace the corresponding interlacing plane (P) essentially parallel to itself.

45. (PREVIOUSLY PRESENTED) The palletizing machine according to claim 43, wherein the control means are designed to control the means (21) for activating the guide (20') so as to wrap the interlacing material (12') around posts (7') on the transport pallet (7) as palletization of the products (2) progresses and in a predetermined interlacing pattern.

46. (CURRENTLY AMENDED) An interlacing device (10, 10') for interlacing a tie material between palletized products deposited by a palletizing machine, the interlacing device comprising:

an interlacing gantry (11, 11') extending generally parallel to and along at least a portion of a length of the palletized products (2), the interlacing gantry (11, 11') having at least one guide (20, 20') supplied with the tie material from ~~the tie material~~ at least one ~~spool (12) of the tie material~~ for facilitating the interlacing of the tie material between the ~~spool (12) of the tie material~~ palletized products; and

a drive for displacing the interlacing gantry (11, 11') between a first position and a second position and laying the tie material along at least one interlacing plane (P) so as to separate portions of the palletized products from one another; [[and]]

wherein the at least one interlacing gantry (11, 11') comprises at least two upright posts interconnected by a cross-beam and the at least two upright posts and the cross-beam extend generally parallel to and along at least a portion of a length of the products (2), at least one guide (20, 20'), carried by the cross-beam, for dispensing an interlacing material (12') from at least one spool (12), the at least two upright posts and the cross-beam extend vertically above and over a gantry base structure (19), and at least a guide section of the gantry base structure (19) extends substantially perpendicular to the cross-beam for facilitating movement of the cross-beam along the interlacing device (10, 10'), the drive for displacing the interlacing gantry (11, 11') is independent from any drive of the palletizing machine so that operation of the interlacing gantry does not interfere with operation of the palletizing machine, and the drive is coupled to the interlacing gantry (11, 11') for displacing the interlacing

gantry (11, 11') inside the palletizing machine (1) and relative and along to the base structure between first and second opposed end positions.

47. (PREVIOUSLY PRESENTED) The interlacing device according to claim 46, wherein the interlacing gantry further comprises a pair of posts (11a) interconnected at a top end thereof by a cross-beam (11b) and supporting the at least one guide for guiding the tie material relative to the palletized products in alternating translation.

48. (PREVIOUSLY PRESENTED) The interlacing device according to claim 47, wherein the interlacing device further comprises at least one chassis (19) equipped with a pathway for guiding the pair of posts (11a) interconnected by the cross-beam (11b) to move relative to the palletized products in alternating translation.

49. (PREVIOUSLY PRESENTED) The interlacing device according to claim 48, wherein the pathway (18) for guiding the pair of posts (11a) is formed in the chassis (19) to receive rollers (17) supporting the pair of posts (11a).

50. (PREVIOUSLY PRESENTED) The interlacing device according to claim 46, wherein the at least one guide for guiding the tie material relative to the palletized products in alternating translation in a first direction further comprises an actuator means (21) for moving the guide relative to the interlacing gantry in alternating translation in a second direction substantially perpendicular to the first direction to wrap the interlacing material around a post supporting the palletized products.